CERCLA RE-ASSESSMENT

REPORT

for

MCLOUTH STEEL CORP GIBRALTAR PLT

28000 River Road
Gibraltar, MI 48173

U.S. EPA ID No.: MID005320254

Assistance #: V-00E00778

March 28, 2013

Completed By: Autumn B. Lawson Date: 3.28.13

Autumn B. Lawson, Senior Environmental Quality Analyst

Reviewed And Approved By: Joseph Walczak Date: 3/28/13

Joseph Walczak, Site Assessment Program Manager

Reviewed And Approved By: Daria W. Devantier Date: 3-28-2013

Daria W. Devantier, Chief
Site Assessment and Site Management Unit
Superfund Section
Remediation and Redevelopment Division
Michigan Department of Environmental Quality

Reviewed And Approved By:_____ Date:_____

Site Assessment Manager
Region 5
United States Environmental Protection Agency

RE-ASSESSMENT
McLouth Steel Corp Gibraltar Plt

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FIGURES

Section 1.0 Introduction

As a result of the United States Environmental Protection Agency (U.S. EPA) time-critical removal action at the Detroit Steel Company - Gibraltar site (DSC - Gibraltar) (U.S. EPA ID No.: MIN00510362), which was requested by the Michigan Department of Environmental Quality (MDEQ), the U.S. EPA tasked the MDEQ to conduct a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Re-Assessment (RA) of the McLouth Steel Corp Gibraltar Plant site (Site) (U.S. EPA ID No.: MID005320254). The authority for this RA work was granted to the MDEQ through a cooperative agreement with the U.S. EPA (Assistance ID No.: V-00E00778-3). The Site was originally assessed in the CERCLA process with Preliminary Assessments (PA) in 1987 and 1990 and given No Further Remedial Action Planned (NFRAP) status. The Site is located at 28000 River Road, Gibraltar, Wayne County, Michigan. It consists of multiple parcels, approximately 350 acres in size which historically operated as a steel finishing operation. The Site includes three landfills primarily used for the disposal of steel production waste (one of which later operated as a demolition debris landfill), and leachate treatment ponds.

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (Title 40 of the Code of Federal Regulations [CFR], Part 300) requires that a PA be performed on all sites entered into the CERCLA Information System (CERCLIS), the U.S. EPA's inventory of hazardous waste sites. The Site was discovered into CERCLIS by the U.S. EPA on August 1, 1980, with an initial PA on November 25, 1987, and subsequent PA on February 7, 1990, when at that time it was given a NFRAP status and archived. At the request of the MDEQ, the U.S. EPA conducted a removal action at the Site which subsequently led to the DSC - Gibraltar site being entered into CERCLIS by the U.S. EPA on March 2, 2010. The DSC - Gibraltar site is the same location of the McLouth Steel Corp Gibraltar Plant Site and as a result of new data, the MDEQ is conducting a RA on the Site. On March 23, 2011, the Site was unarchived so that the RA could be conducted.

The RA is performed under the authority of CERCLA and is an investigatory step in the CERCLA Superfund process. The RA involves a limited scope investigation that collects readily available information. The RA is designed to re-evaluate sites to distinguish between sites that pose little or no threat to human health and the environment and those that require further investigation. The RA may also determine that a site qualifies for National Priorities List (NPL) listing or support emergency response activities and public information needs.

If the findings of the RA determine that further investigation is warranted, the Site will continue to progress through the Superfund investigative process and undergo a CERCLA Site Inspection (SI). The SI will further evaluate threats to human health and the environment and collect additional data for further evaluation in the Superfund process. This evaluation may be accomplished through the collection and analysis of additional waste and environmental media samples to determine whether hazardous substances are present at the Site and are migrating to the surrounding environment and

potential human and environmental targets. The SI provides the necessary information required to determine if the Site qualifies for possible inclusion on the NPL or if the Site should be designated as NFRAP in the Superfund process. At any time throughout this Superfund evaluation process, the Site may be designated as NFRAP, be referred to another state or federal cleanup program (Other Cleanup Authority), or be recommended for further Superfund action.

Section 2.0 Site Background

Section 2.1 Site Description

The Site is located at 28000 River Road in Gibraltar, Wayne County, Michigan (see Figure 1). The location coordinates for the Site at the center of the property are latitude 42.106389 and longitude -83.205833. The Site consists of approximately 350 acres and was historically operated as a steel finishing operation with three landfills, and a leachate treatment lagoon system. Landfills A and B are located on the east side of the Site and have an associated leachate treatment lagoon system. The landfill on the west side of the Site is known as Countywide Landfill (CWLF). CWLF historically accepted steel production waste from McLouth Steel Products (McLouth) in Trenton as well as from on-site McLouth operations in Gibraltar, and later operated as a demolition debris landfill.

The Site is bound by West Jefferson Avenue, a National Wildlife Refuge, and residential homes to the east. Vreeland Road, residential homes, commercial property, and undeveloped land are north of the Site. Gibraltar Road, residential homes, and a rail spur are to the south. The Canadian National North America rail line and commercial properties are located to the west. The Humbug Marsh is part of the Detroit River International Wildlife Refuge and is located adjacent to the Site to the east. Two rail lines, Brownstown Creek and the Frank & Poet drain bisect the Site between Countywide Landfill and Landfill Areas A and B. The creek and drain eventually run into the Detroit River. Brownstown Creek drains into the Frank & Poet drain before it runs into the Detroit River. The Trenton Channel of the Detroit River is approximately 1,500 feet east of the Site. The Site consists of the former McLouth steel mill, Landfills A and B and the associated leachate treatment system, and the Countywide Landfill located at 15701 Vreeland Road, Gibraltar, Michigan.

Section 2.2 Site Operational History

McLouth Steel Company owned and operated the property as a steel finishing facility, including annealing, pickling, and cold rolling processes beginning in the early 1950s. In 1996, mill operations ceased when the Site was sold to the Detroit Steel Company, Ltd. (DSC). In 2007, 42 acres of the property, including the former mill building, were sold to Steel Rolling Holdings, Inc.

West of the mill on the opposite side of the Frank & Poet Drain is CWLF, formerly owned and operated by McLouth Steel Company, which was originally licensed in 1976 under Michigan's original Solid Waste Management Act, 1965 PA 87. It received steel manufacturing wastes from McLouth Steel Products in Trenton as well as from the Gibraltar Plant. Material from the Trenton facility was delivered in trucks and dumped in the landfill. This included mill scale, blast furnace dust, filter cake, and grit. The filling operations continued until the mid-1980s when all but a small portion of the quarry was filled. Those areas not filled were noted to contain ponded water. In 1982, a permit was issued for the continued operation of a Type III landfill under the former Solid

Waste Management Act, 1978 PA 641. The ponded water areas were reportedly filled with construction debris from re-construction of roadways near the area.

On July 11, 1996, the sale of McLouth's assets to Hamlin Holdings, Inc., was approved by the Bankruptcy Court and on August 14, 1996, the closing on the sale took place, at which title to the Gibraltar facility was transferred to DSC.

Located south of the mill building are two closed landfill cells, known as Landfills A and B; the associated leachate treatment lagoon system; and the partially closed Tandem Mill Pond (TMP). The leachate treatment lagoon system includes a series of 6 basins and ponds and the TMP. The partially closed TMP historically received liquid wastes from the McLouth cold mill operation. It still contains residual oils mixed with storm water. DSC operates the leachate treatment system. The TMP is an oil separation pond which received oily process water from the plant, where it was acidified to allow oil to separate from the water. Water from the TMP was then pumped to lagoons for further processing prior to discharge through an outfall into the Frank & Poet Drain.

Responding to a request by the MDEQ in 2010, the U.S. EPA constructed a leachate collection system for the CWLF, filled the eastern and western leachate ponds with stone and covered them with clay, installed a loading pipe with level indicator, leveled and graded the cap, and seeded the exposed areas of CWLF. Three aerators were also added to the leachate treatment lagoon system. This Time-Critical Removal Action cost approximately $2,000,000. Based on the need for a final remedy to cap the landfills, close the treatment ponds, find an alternative leachate disposal method, and conduct long-term remedial action to minimize and dispose of leachate, the U.S. EPA also collected additional environmental data to assist with future NPL consideration.

The CWLF is currently not operating and does not have an operating license. The MDEQ manages the leachate through the site's Perpetual Care Fund (PCF), a fund established for financial assurance licensed under Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). Approximately 10,000 gallons per day are pumped and hauled off-site, 5 days per week. The balance of the PCF is expected to be exhausted by the end of 2013.

In addition, current operations at the Site include operation of the cold mill by Steel Rolling Holdings Inc. Leachate collected from Landfills A and B is treated by the leachate treatment lagoon system with no future financial assurance mechanism.

Section 2.3 Site Regulatory Status

On December 4, 1997, the Wayne County Circuit Court entered Consent Judgment 97-738609 (Consent Judgment) between the Gibraltar Land Company (GLC) and the MDEQ, to address violations at CWLF and McLouth Steel Products Corporation. It is unclear when DSC Ltd., transferred the property to GLC. On September 5, 2005, a Solid Waste Disposal Area Operating License (License) was

issued to GLC. On June 12, 2007, a Notice of Violation (NOV) was issued to CWLF by the MDEQ, for multiple violations of the Consent Judgment and the Special Conditions in the License. On May 5, 2010, a Violation Notice and Notice of Intent for License Revocation were issued to GLC by the MDEQ pursuant to Part 115, of the NREPA, summarizing past and ongoing violations that occurred since June 2006.

On June 21, 1999, the U.S. EPA entered Administrative Order Docket No. R7003-5-99-003 (Order) with DSC Ltd. for solid waste handling violations, which may present an imminent and substantial endangerment to health or the environment. Therefore, DSC is undertaking response activities at the TMP as required by the Order. The Order requires DSC to stop the exposure of migratory birds to solid wastes at the TMP and to protect wildlife and wildlife habitat from any harmful effects of solid waste. DSC is currently reducing oil in the TMP and providing wildlife deterrents by using a noise cannon to scare away wildlife. Based on U.S. EPA inspections in September 1999, dead birds were found in the vicinity of the Site near the TMP. Oil in the TMP is comprised of process oils including lubricating, hydraulic, rolling, and slushing oils.

On February 28, 2008, GLC notified the MDEQ that GLC could no longer afford to pay to have landfill leachate pumped and hauled to a disposal facility. At that time, it was determined GLC was unable to fulfill their regulatory obligations and responsibilities to manage or close CWLF. On March 13, 2008, the MDEQ was granted access to CWLF for purposes of managing the leachate and overseeing the closure of CWLF. The MDEQ uses funds from CWLF PCF to pay to have landfill leachate pumped and hauled to a disposal facility. The PCF is expected to run out of funds in October 2013. The CWLF was never closed or properly capped and, as a result, consistently has leachate breakouts that run into Brownstown Creek.

Leachate from Landfills A and B is treated in a lagoon system and discharged to the Frank & Poet Drain under an expired National Pollution Discharge Elimination System (NPDES) permit. The treatment system consists of solids settling, pH adjustment, ammonia reduction, and aeration. The current system has not been properly maintained and does not reliably meet effluent discharge requirements. Sampling conducted by the USEPA has demonstrated that additional constituents of concern may be present in the leachate that are not being adequately treated by the current system or monitored by the current permit requirements. Significant system upgrades would be required prior to reissuance of an NPDES permit.

Section 3.0 Sources

Sources at the Site include leachate treatment lagoon system ponds and basins, Landfills A and B, and the CWLF.

Leachate Treatment Lagoon System Ponds and Basins:
The leachate treatment lagoon system includes a series of 4 water retention basins and 2 ponds, including the TMP. The TMP is an oil separation pond located south of the production building, approximately 6.2 acres in size. South of the TMP is an Acid Dosing Pond, 1.1 acres in size and a Sludge Drying Pond, 1.4 acres in size. North of the TMP are 4 water rentention basins: .2 acres; .9 acres; 1.1 acres; and 1.4 acres in size. The treatment system consists of solids settling, pH adjustment, ammonia reduction, and aeration.

Oily process water from the plant was pumped to the TMP, where it was acidified to allow oil to separate from the water. Water from the TMP was then pumped to lagoons for further processing prior to discharge through an outfall into the Frank & Poet Drain. The current system has not been properly maintained and does not reliably meet effluent discharge requirements. Water discharged into the Frank & Poet Drain contains documented phenols, polychlorinated biphenyls (PCBs), metals, and high pH. Oil in the TMP is comprised of process oils including lubricating, hydraulic, rolling, and slushing oils. Dead birds continue to be found in the vicinity of the Site due to the oils found in the TMP.

Landfills A and B:
These landfills are located south and west of the leachate treatment ponds and basins. They contain steel mill sludge. Landfill A is approximately 23 acres in size and Landfill B is approximately 32 acres in size. Leachate from these landfills contains naphthalene, phenol, mercury, 2,4-dimethylphenol, barium, and cyanide.

Countywide Landfill:
West of the mill is the CWLF, approximately 93 acres in size, containing steel manufacturing waste including mill scale, blast furnace dust, filter cake, and grit. The landfill had historical ponded water areas that were reportedly filled with construction debris from re-construction of roadways near the area. The landfill has frequent leachate outbreaks that flow into Brownstown Creek. Leachate contains carbazole, mercury, silver, PCBs, selenium, vanadium, zinc, cyanide, carbon disulfide, phosphorus, naphthalene, 2,4-dimethylphenol, phenol, and nickel.

Section 4.0 Pathway Discussions

Section 4.1 Groundwater

The groundwater pathway is an exposure pathway of concern due to the documented release of contaminants from source areas of the Site into the aquifer at levels that are a concern to either drinking water resources or through groundwater venting to Brownstown Creek, Frank & Poet Drain, and the Detroit River.

The Site stratigraphy consists of fill overlying a lacustrine clay stratum over dolomitic bedrock. The surficial fill varies from 5 feet to 15 feet. The clay layer is 18 feet to 35 feet thick. Historical groundwater investigations indicate groundwater was observed at the clay/bedrock interface on the Site. In general, groundwater flows from the north-northeast with an unexplained groundwater depression beneath the CWLF.

Analytical results from the *May 2011 Draft Environmental Assessment Report for the Former McLouth Steel – Gibraltar Complex Site* by EQ reveal arsenic, cyanide, lead, naphthalene, nickel, and phenols in the groundwater above background levels.

Drinking water for the area is mainly provided by a municipal utility which utilizes surface water outside the 4-Mile Target Distance Limit (TDL) but within the 15-Mile TDL. Although the area is serviced through the municipal utility, there are sporadic groundwater wells within the 4-Mile TDL. The closest private well is within 2 miles of the Site. Due to the sporadic nature of the wells and unknown use, it is difficult to quantify the population served by these wells within the 4-Mile TDL. See Figure 3 for a 4-Mile Radius Map.

Section 4.2 Surface Water

The surface water pathway is a major exposure pathway of concern for this Site. Brownstown Creek and the Frank & Poet Drain run through the Site and pass through the city of Gibraltar and empty into the Detroit River. Surface water and leachate from the CWLF drains into Brownstown Creek and surface water runoff, leachate, and discharges from the treatment ponds from the eastern area of the Site drain into the Frank & Poet Drain.

The Probable Point of Entry (PPE) of contaminants into the surface water pathway is along the wetlands and streams on the Site and at the discharge pipe from the ponds and basins located on the Site. The 15-Mile TDL for the surface water pathway includes these wetlands and streams, the Detroit River, and Lake Erie. Some drinking water for the area is provided by the Frenchtown Public Water Supply, a municipal utility which utilizes a surface water intake located within the 15-Mile TDL which services 19,800 residents. Surface water features are shown in Figure 4.

The Detroit River is designated an American Heritage River and a Canadian Heritage River – the only river to have this dual designation. In addition, it is home to the

Humbug Marsh, which is listed as a wetland of international importance. The Humbug Marsh is part of the U.S. Fish & Wildlife Service's Detroit River International Wildlife Refuge, the first international refuge in North America.

The Detroit River is used for recreation and fishing. It is home to a recovering number of bird species, such as eagles, ospreys, and peregrine falcons. Fish species in abundance in the area include lake whitefish, sturgeon, salmon, perch, and walleye. Numerous mammal species also occupy the coastline throughout the refuge. The area serves as a vital migratory route and resting place for countless species of birds. Over 30 species of waterfowl, 17 species of raptors, 31 species of shorebirds, 160 species of songbirds, and 117 species of fish live along or regularly migrate through the Detroit River. In addition to the numerous bird and fish species in the area, it is habitat known to be used by 29 federal and state designated endangered and threatened species. Some of these include: the Indiana bat, lake sturgeon, peregrine falcon, northern riffleshell, black sandshell, king rail, common tern, eastern pond mussel, eastern fox snake, threehorn wartyback, and the barn owl. Evidence of exposure to Site contaminants is documented as dead birds are frequently found in the vicinity of the TMP due to oils floating at the surface.

Approximately 14 miles of wetland frontage have been documented along the Michigan side of the Detroit River. More detailed investigation of the sensitive environmental resource along both the Michigan and Canadian sides of the river will likely result in additional targets.

Analytical results from the *May 2011 Draft Environmental Assessment Report for the Former McLouth Steel – Gibraltar Complex Site* by EQ reveal arsenic, endrin, lead, mercury, naphthalene, nickel, and PCBs in the surface water and/or sediments above background levels.

Section 4.3 Soil Exposure

The Site is the location of a former steel finishing facility, leachate treatment ponds and three landfills. The potential exists for soil contamination around the former buildings, ponds, as well as around the landfills which have observed leachate outbreaks occurring frequently. Analytical results from leachate samples reveal phenols, metals and pH exceeding 12.5. Leachate collection from CWLF is currently managed by the MDEQ through the PCF, but funds will be depleted by October 2013. The October 1997 *Summary of Initial Site Assessment Results, DSC ltd. – Gibraltar Plant* by Techna Corporation states analytical results from soil samples reveal concentrations for barium, chromium, lead, and zinc were detected above background levels.

The Site is fenced but can be accessed by trespassing from the creeks. Approximately 50 workers are at the Site daily. There are no schools located within 200 feet of the Site.

Section 4.4 Air

There is a potential for migration of Site contaminants through the air pathway. Potential contaminants associated with steel manufacturing facility operations are volatile and have a potential for gas migration. The other component of the air pathway is particulate migration. Documented contaminants present in the surficial soils have a potential for particulate migration.

Section 5.0 Summary

The MDEQ was tasked by the U.S. EPA to evaluate the current and potential impacts to surrounding human populations and environmental resources through the groundwater, surface water, soil exposure, and air pathways and to use this evaluation to determine the status of the Site in the Superfund process. This evaluation was based on existing data and research of available information for the Site area and the Site's potential contaminant sources.

The Site is the location of a former steel finishing facility, leachate treatment system, and three landfills. It consists of approximately 350 acres located in a residential and commercial/industrial area in Gibraltar, Michigan, just west of the Detroit River. A creek and a drain run through the property which drain into the Detroit River which forms the boundary between Michigan and Canada. The Humbug Marsh, part of the U.S. Fish & Wildlife Service's Detroit River International Wildlife Refuge, is directly adjacent and downstream of the Site.

Although leachate from all three landfills is purportedly collected and treated or hauled away, documented leachate outbreaks from the landfills flow into the Frank & Poet Drain and Brownstown Creek. Leachate consisting of phenols and high pH from Landfills A and B is collected and sent to the leachate treatment lagoon system. The system discharges through an outfall into the Frank & Poet Drain. DSC is operating under an expired NPDES permit for the discharge and is not monitoring for constituents of concern contained in the discharge. Analytical results from sediments at the outfall reveal naphthalene, PCBs, and phenols. While DSC currently operates the treatment system, the U.S. EPA has been unable to reach agreement with them or any other entity to continue the operation in the long-term.

Leachate collection and disposal at the CWLF is currently managed by the MDEQ through the PCF. PCF funds are expected to run out by October 2013. A long-term funding source is needed to manage the leachate at the landfill. Leachate is trucked out at a rate of approximately 10,000 gallons a day, five times a week. Future operation and maintenance of leachate collection on the Site is uncertain.

Groundwater on the Site has been shown to be impacted by Site contaminants, specifically arsenic, cyanide, lead, naphthalene, nickel, and phenols**.** Documented metals found in soils pose a potential direct contact risk to workers on the Site.

The Frank & Poet Drain sediments have been shown to be impacted by Site contaminants, specifically endrin, naphthalene, and PCBs. Surface water on the Site is impacted by arsenic, endrin, lead, mercury, naphthalene, nickel, and PCBs. The 15-Mile TDL includes the Frank & Poet Drain, Brownstown Creek, 14 miles of wetlands and the Detroit River. The Frank & Poet Drain flows through the Humbug Marsh which is habitat known to be used by many designated federal and state endangered and threatened species. The drain, creek, and river are documented to be used for recreation and fishing.

The U.S. EPA Removal Branch requested the Site be evaluated for NPL inclusion due to the following needs: installation of final caps for all landfills, resolution of leachate management and disposal needs, and implementation of a long-term remedy to protect human health and the environment.

Section 6.0 References

Environmental Quality Management Inc. (EQ), Draft Environmental Assessment Report, Former McLouth Steel – Gibraltar Complex Site, May 6, 2011.

Environmental Strategies Corporation (ESC), Quarterly Project Status Report, Comprehensive Corrective Action and Remedial Consent Order, WMD Order No. 111-15-99, DSC Ltd., Trenton and Gibraltar, Michigan, Received November 20, 2000.

ESC, Revised Interim Response Activity Work Plan, Tandem Mill Pond, DSC Ltd., Gibraltar, Michigan, May 23, 2000.

ESC, Update Continuing Emergency Measures Work Plan, Tandem Mill Pond, DSC Ltd., Gibraltar, Michigan, November 14, 2001.

Michigan Department of Environmental Quality (MDEQ), Public water supply intakes in Michigan: Great Lakes and connecting waters. Appendix N - public water supply intake map, 1999.

MDEQ, Quality Assurance Project Plan for Region 5 Superfund Site Assessment and Brownfield Activities in Michigan, January 16, 2003.

MDEQ, Community Water Supply Inventory. A Microsoft Excel workbook containing community water supply information, courtesy of Ms. Kristen S. Philip, Resource Specialist, MDEQ Water Bureau Field Operations Section, Lansing, Michigan, January 16, 2004.

MDEQ, Remediation and Redevelopment Division (RRD), Superfund Section, McLouth Steel, Gibraltar site file, March 2013.

MDEQ, RRD Operational Memorandum No. 1, Part 201 Cleanup Criteria, Part 213 Risk-based Screening Levels, December 10, 2004.

MDEQ, Waste and Hazardous Materials Division, Countywide Landfill Part 115 Violation Notice, Notice of Intent for License Revocation, Waste Data System Number 424881, May 5, 2010.

MDEQ, Waste Management Division and Environmental Response Division, Comprehensive Corrective Action and Remedial Consent Order for Trenton and Gibraltar Facilities, WMD Order No. 111-15-99, December 17, 1999.

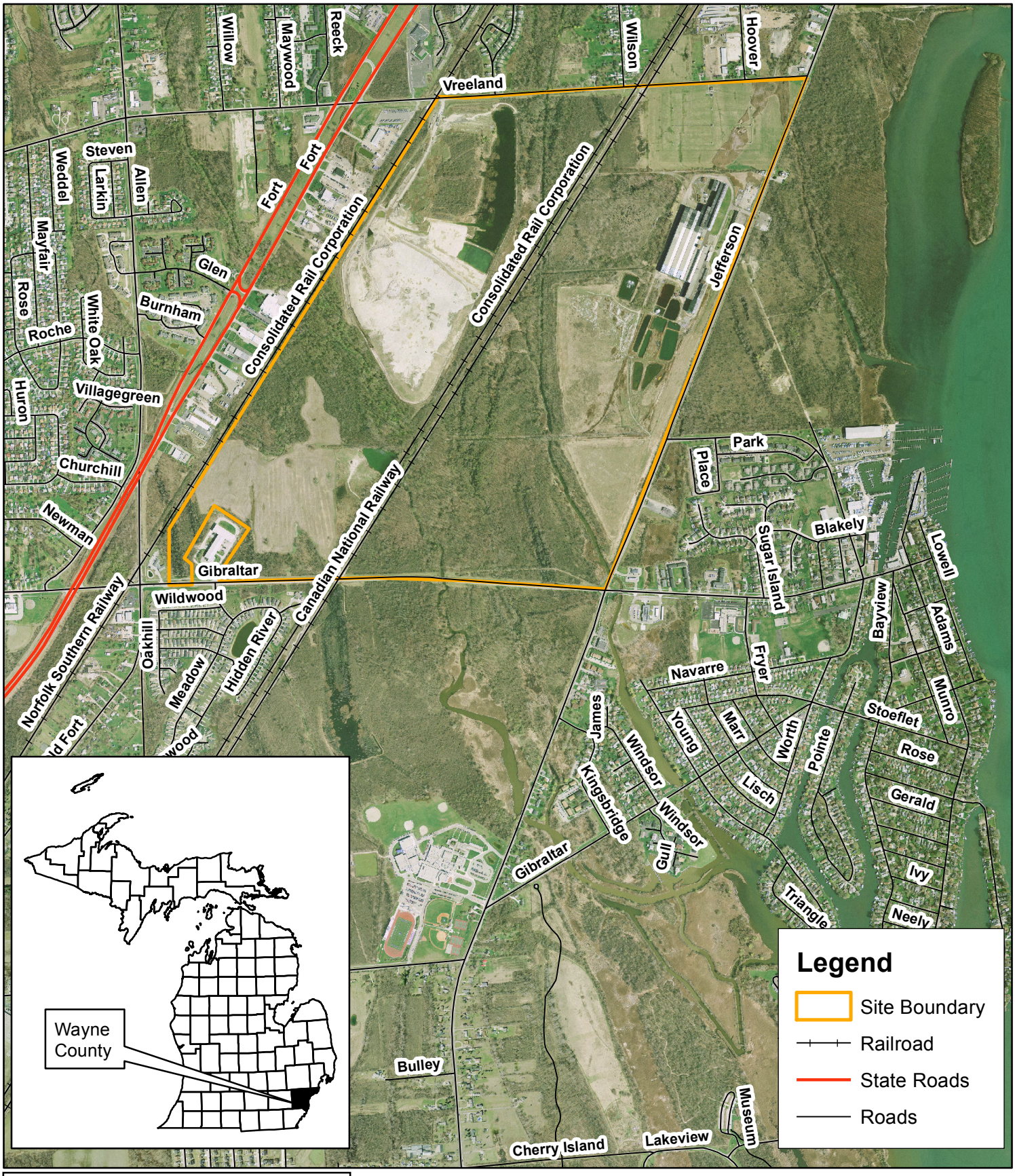
Techna Corporation, Summary of Initial Site Assessment Results, DSC ltd. – Gibraltar Plant, October 20, 1997.

United States Environmental Protection Agency (U.S. EPA), Pollution Reports (inclusive) for Former McLouth Steel Gibraltar-Complex Site, 2010-2011.

U.S. EPA, Administrative Order, Docket No. R7003-5-99-003, June 21, 1999.

Figures

FIGURE 1
SITE LOCATION



Site Reassessment
McLouth Steel Corp Gibraltar Plant Site
28000 W. River Road
Gibraltar, MI 48173
MID005320254

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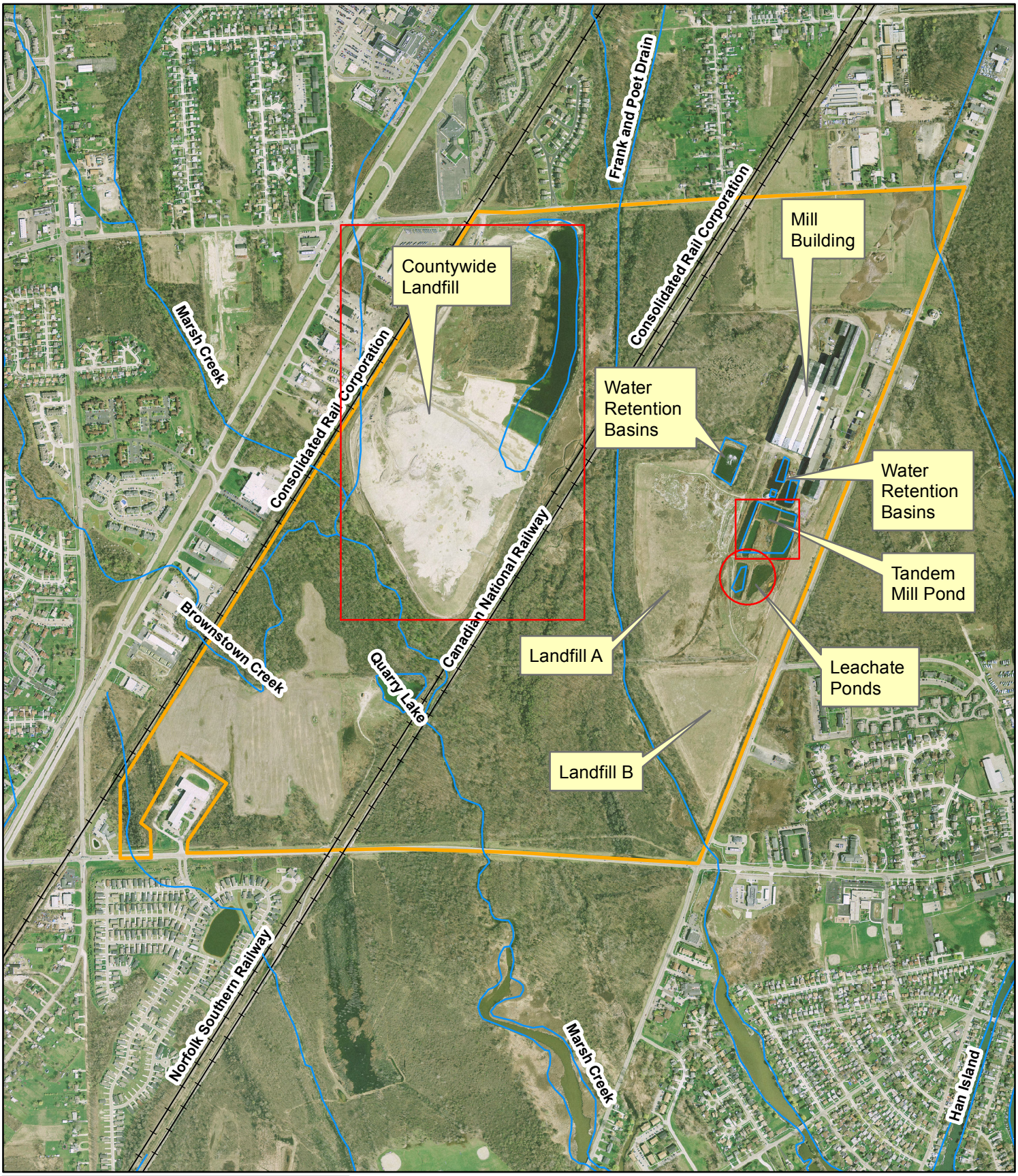
0 750 1,500 3,000 Feet

Compiled by: Leni L. Steiner-Zehender
February 2013
Projected Coordinate System:
Michigan GeoRef, NAD-83, meters
Completed with ESRI ArcView 10.1
Source: Michigan Geographic Data Library

FIGURE 2
SITE FEATURES



Site Reassessment
McLouth Steel Corp Gibraltar Plant Site
28000 W. River Road
Gibraltar, MI 48173
MID005320254

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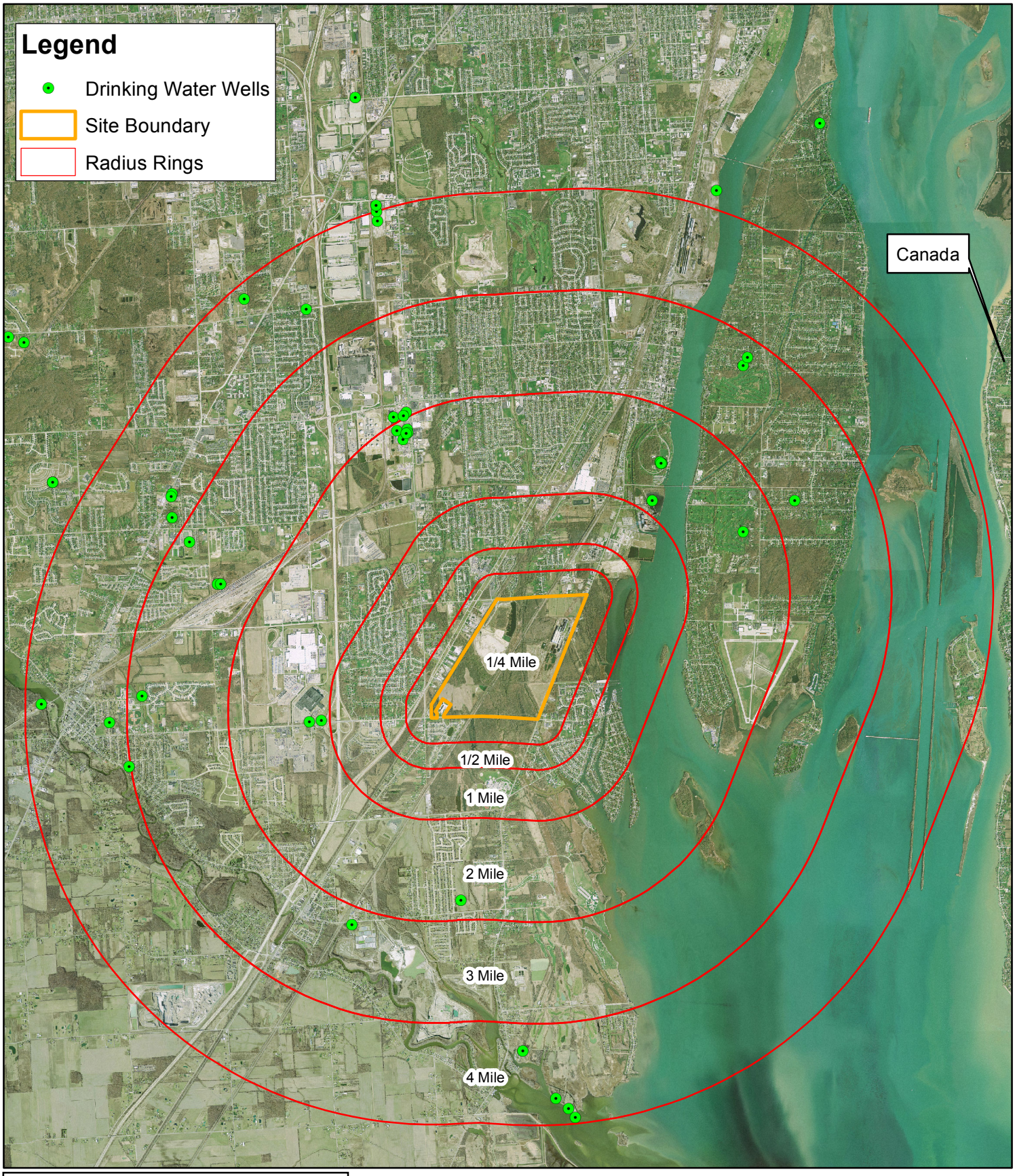
0 500 1,000 2,000 Feet

Compiled by: Leni L. Steiner-Zehender
February 2013
Projected Coordinate System:
Michigan GeoRef, NAD-83, meters
Completed with ESRI ArcView 10.1
Source: Michigan Geographic Data Library

FIGURE 3
4-MILE RADIUS MAP



Site Reassessment
McLouth Steel Corp Gibraltar Plant Site
28000 W. River Road
Gibraltar, MI 48173
MID005320254

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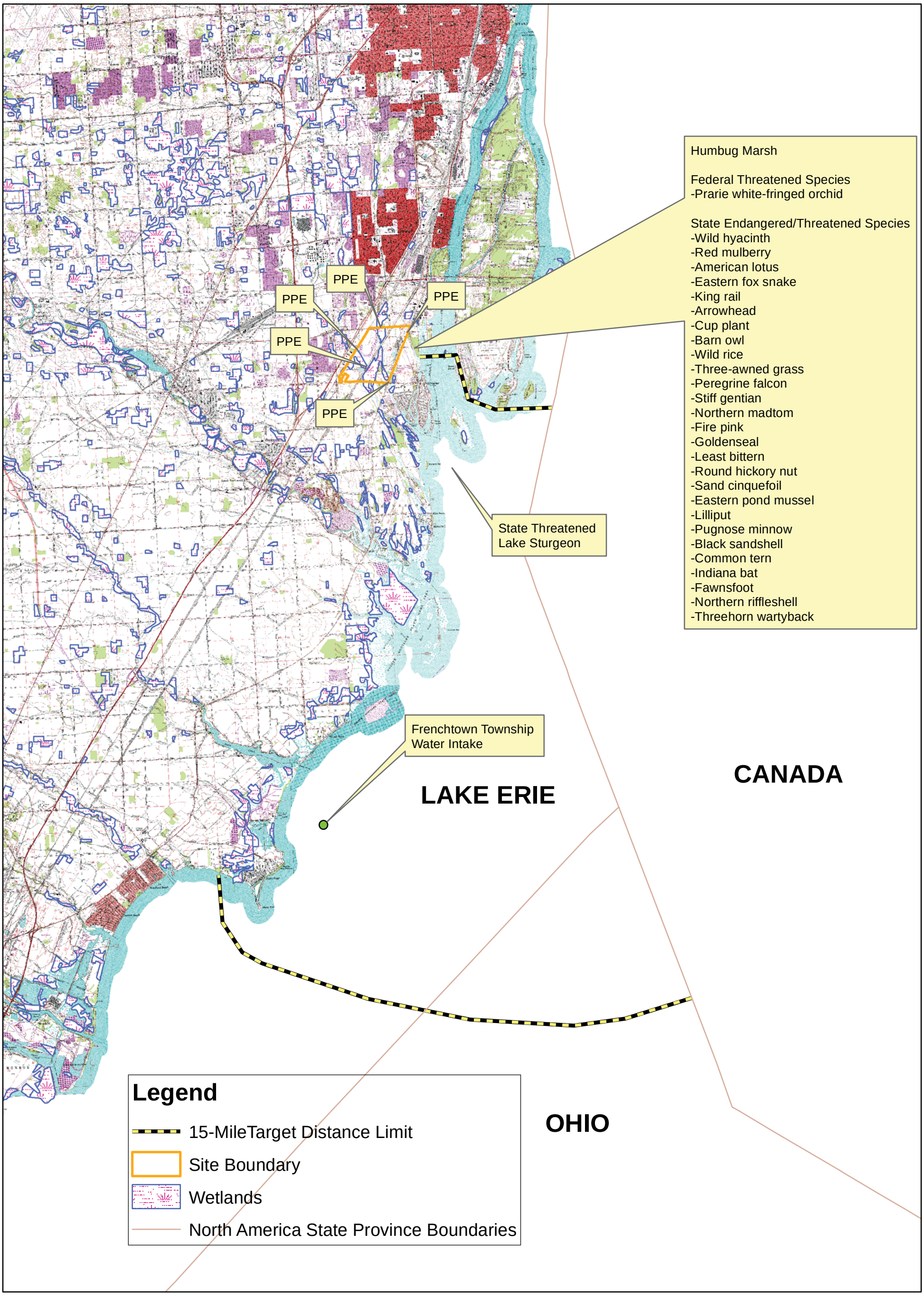
0 1 2 Miles

Compiled by: Leni L. Steiner-Zehender
February 2013
Projected Coordinate System:
Michigan GeoRef, NAD-83, meters
Completed with ESRI ArcView 10.1
Source: Michigan Geographic Data Library

FIGURE 4
15-MILE SURFACE WATER PATHWAY



Site Reassessment
McLouth Steel Corp Gibraltar Plant Site
28000 W. River Road
Gibraltar, MI 48173
MID005320254

0 2 4 Miles

N W E S

Compiled by: Leni L. Steiner-Zehender
February 2013
Projected Coordinate System:
Michigan GeoRef, NAD-83, meters
Completed with ESRI ArcView 10.1
Source: Michigan Geographic Data Library

FIELD PHOTOGRAPHY LOG SHEET

PROPERTY NAME: McLouth Steel Corp Gibraltar Plant Site PAGE: 1 OF: 5
U.S. EPA ID #: MID005320254

DATE: 2/21/2012

DIRECTION OF PHOTOGRAPH: South

PHOTOGRAPH BY: Autumn Lawson

DESCRIPTION: Water retention basin.

DATE: 2/21/2012

DIRECTION OF PHOTOGRAPH: West

PHOTOGRAPH BY: Autumn Lawson

DESCRIPTION: Leachate treatment lagoon system building.

FIELD PHOTOGRAPHY LOG SHEET

PROPERTY NAME: McLouth Steel Corp Gibraltar Plant Site PAGE: 2 OF: 5
U.S. EPA ID #: MID005320254

DATE: 2/21/2012

DIRECTION OF PHOTOGRAPH: East

PHOTOGRAPH BY: Autumn Lawson

DESCRIPTION: Buildings on Site.

DATE: 2/21/2012

DIRECTION OF PHOTOGRAPH: South

PHOTOGRAPH BY: Autumn Lawson

DESCRIPTION: Water retention basin on right and mill building on left.

FIELD PHOTOGRAPHY LOG SHEET

PROPERTY NAME: McLouth Steel Corp Gibraltar Plant Site PAGE: 3 OF: 5
U.S. EPA ID #: MID005320254

DATE: 2/21/2012

DIRECTION OF PHOTOGRAPH: South

PHOTOGRAPH BY: Autumn Lawson

DESCRIPTION: Side of CWLF with leachate outbreak.

DATE: 2/21/2012

DIRECTION OF PHOTOGRAPH: Southwest

PHOTOGRAPH BY: Autumn Lawson

DESCRIPTION: Leachate outbreak at CWLF. Brownstown Creek is towards top right of photo.

FIELD PHOTOGRAPHY LOG SHEET

PROPERTY NAME: McLouth Steel Corp Gibraltar Plant Site PAGE: 4 OF: 5
U.S. EPA ID #: MID005320254

DATE: 2/21/2012

DIRECTION OF PHOTOGRAPH: South

PHOTOGRAPH BY: Autumn Lawson

DESCRIPTION: Leachate outbreak at CWLF.

DATE: 2/21/2012

DIRECTION OF PHOTOGRAPH: West

PHOTOGRAPH BY: Autumn Lawson

DESCRIPTION: Leachate outbreak at CWLF draining towards Brownstown Creek.

FIELD PHOTOGRAPHY LOG SHEET

PROPERTY NAME: McLouth Steel Corp Gibraltar Plant Site PAGE: 5 OF: 5
U.S. EPA ID #: MID005320254

DATE: 2/21/2012

DIRECTION OF PHOTOGRAPH: North

PHOTOGRAPH BY: Autumn Lawson

DESCRIPTION: Frank & Poet Drain downstream of Site.

DATE: 2/21/2013

DIRECTION OF PHOTOGRAPH: South

PHOTOGRAPH BY: Autumn Lawson

DESCRIPTION: Brownstown Creek downstream of Site.